

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
5 February 2004 (05.02.2004)

PCT

(10) International Publication Number
WO 2004/011265 A1

(51) International Patent Classification⁷: **B41J 2/51,**
G06K 15/10

(21) International Application Number:
PCT/GB2003/003026

(22) International Filing Date: 11 July 2003 (11.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0217248.4 25 July 2002 (25.07.2002) GB

(71) Applicant (for all designated States except US): **WIL-
LETT INTERNATIONAL LIMITED** [GB/GB]; 3
Cronin Road, Weldon South Industrial Estate, Corby,
Northants NN18 8AQ (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HORSNELL,**

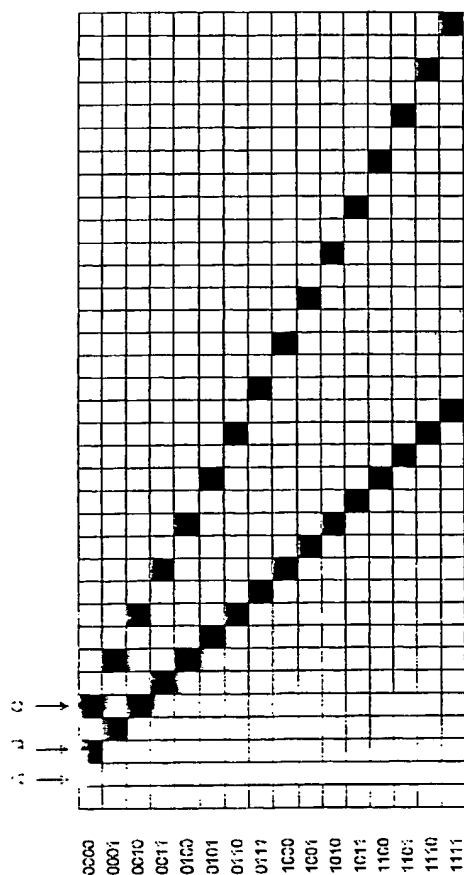
David, Andrew [GB/GB]; 3 Perne Road, Cambridge, CB1
3RX (GB). **TOMLIN, Matthew, Brian** [GB/GB];
4 Lingholme Close, Cambridge CB4 3HW (GB).
LECHEHEB, Ammar [GB/GB]; 3 The Paddock,
Harston, Cambridge CB2 4PR (GB). **PRIME, Oliver,**
John [GB/GB]; 5 Lingholme Close, Cambridge CB4
3HW (GB). **FOX, Michael, James** [GB/GB]; Silver-
stones, Church Lane, Seaton, Rutland LE15 9HR (GB).
BATES, Christopher, Michael [GB/GB]; Boughton
Spinney, Kettering, Northants NN16 9JP (GB).

(74) Agents: **WILSON, Peter, David** et al.; Dummett Copp,
25 The Square, Martlesham Heath, Ipswich IP5 3SL (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD,

[Continued on next page]

(54) Title: PRINTING DEVICE AND METHOD USING VALVE CONTROL



(57) Abstract: The present invention provides a method of printing an image, and an apparatus for performing the method, the method comprising the steps of: (a) generating print data representing the image to be printed; (b) dividing the print data into a plurality of sub-elements; (c) writing each print data sub-element into respective memory means locations; (d) sequentially reading the memory means; and (e) printing an iamb by activating a print valve in accordance with print data sub-element read from the memory means. The method enables printing heads to be slanted such that different print heights can be obtained whilst still printing in a vertical orientation.